

## ABSTRACT

The present invention relates to a method of manufacturing a flash memory device, in which a spike annealing is performed after an ion implantation for controlling a threshold voltage. Therefore, it is possible to  
5 obtain a uniform and stabilized doping profile for controlling a threshold voltage, to use  $\text{BF}_2$  ions as a dose for controlling a threshold voltage to obtain a shallow channel junction, to obtain different doping profiles in the channel junction depending on the process conditions and the atmosphere in the spike annealing equipment, and to control a doping profile for controlling a  
10 threshold voltage.